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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/456,531      | 12/08/1999  | SHIGEO OHSAKA        | 991387              | 6582             |

23850 7590 10/23/2002

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EXAMINER

MENEFEE, JAMES A

ART UNIT PAPER NUMBER

2828

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/456,531

Applicant(s)

OHSAKA ET AL.

Examiner

James A. Menefee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
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**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 24 January 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's amendment filed on 24 July 2002 has been entered. Claims 1-3, 5, 7-8, and 13-14 are amended. Claims 1-16 are pending.

### ***Drawings***

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 24 January 2002 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

The Patent and Trademark Office no longer makes drawing changes. See 1017 O.G. 4. It is applicant's responsibility to ensure that the drawings are corrected. Corrections must be made in accordance with the instructions below.

## **INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

### **1. Correction of Informalities -- 37 CFR 1.85**

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE**

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**MONTH** shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

**2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.**

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

**Timing of Corrections**

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.185(a). Failure to take corrective action within the set (or extended) period will result in **ABANDONMENT** of the application.

***Double Patenting***

Applicant is advised that should claims 1, 3-4, 7, 9, 11, 13, and 15 be found allowable, claims 2, 5-6, 8, 10, 12, 14, and 16 respectively will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Though the claimed devices differ in their manner of forming, the resultant products are identical. The method of forming a device is not germane to the patentability of the device itself, and therefore only the end result, and not the method of forming, is considered.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al. (US 6,226,310). Takagi discloses the claimed limitations in Figs. 3a-d as follows:

Regarding claims 1-2, Takagi discloses an electrode structure comprising a conductive layer 36 formed on an insulating layer, and the insulating layer formed on a substrate 31. The conductive layer 36 does not penetrate the insulating layer. The insulating layer comprises a plurality of poles 63 of a current blocking layer, a first film 53 formed on the sides of the current blocking layer 63 and having a higher hardness than the current blocking layer 63, and a film of polyimide 52 is buried among the plurality of poles with the first film 53 formed on the sides thereof. It is not disclosed that the current blocking layer be made of polyimide. However, it is well known in the art that polyimide may be used as a current blocking layer in a semiconductor device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the current blocking layer of polyimide, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

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Regarding claims 3, 5, and 13-16, the electrode structure is part of a semiconductor light emitting device, the device having a waveguide, an upper electrode, and a lower electrode, the upper electrode having the structure as disclosed above.

Regarding claims 4 and 6, the layer of higher hardness than polyimide 54 is also formed on an upper surface poles.

Regarding claims 7-8, there is not disclosed another insulating film between the conductive layer and the insulating layer. This second insulating layer is provided in order to supply further insulation. To duplicate parts for a multiplied effect is evidence of obviousness. See *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8 at 11 (CA 7<sup>th</sup> Cir.).

Regarding claims 9-10, it is not disclosed that the conducting film is a bonding pad. It is well known in the art that a conducting film on the top of a semiconductor device may be a bonding pad. It would have been obvious to one skilled in the art to have a bonding pad on top of the device so that bonding wires may be attached to the pad, providing a current to the bonding pad and thus the device, so that the device may operate, as is well known.

Regarding claims 11-12, the layer of higher hardness than polyimide 53 continues between the insulating layer and the substrate 31.

### ***Response to Arguments***

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

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### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Mikagi (US 6,274,923) discloses a device having a conductive film, an insulating film, and a substrate. The insulating film contains poles of polyimide 108 and a harder insulating material 110 formed on the poles. However, the conductive film penetrates the insulating film, and must necessarily do so in order for the device to function as disclosed, therefore this device cannot meet limitations of the present invention. In addition, the reference priority date is not early enough to be used as prior art.

Sakuri et al. (US 6,201,825) discloses a device having a conductive film, an insulating film, and a substrate. The insulating film contains poles of polyimide 50 and a harder insulating material formed on the poles. However, there is not a second film of polyimide buried among the poles. In addition, the reference priority date is not early enough to be used as prior art.

Chino et al. (US 5,796,714) discloses in Fig. 9 a device having a conductive film, an insulating film, and a substrate. The insulating film contains poles of polyimide 22 and a harder insulating material 168 formed on the poles. However, there is no suggestion of a second film of polyimide buried among the poles. In fact, the layer buried among the poles is a reflector 146, and it would be impossible to replace such a layer with a polyimide layer in order to meet the present claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Menefee whose telephone number is (703) 605-4367. The examiner can normally be reached on M-F 8:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JM  
October 9, 2002



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